Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended) : Device for the *in-vivo* measurement of the concentration of an analyte in a body fluid comprising a) a component with a flexible surface, b) means for securing adherence of that surface to the skin, c) a rigid part holding one or more subcutaneously implantable sensors, d) means to position the flexible surface relative to the sensors in such a way that in a first position the sensors are concealed by the surface and in a second position ~~the~~ implantable parts of the sensors are exposed above the surface, and e) a **releasable** mechanism **that when locked deforms** ~~to deform~~ the surface to a convex shape **in the first position and when released causes the surface to adopt the second position.** ~~and to bend it from one to the other position~~

Claim 2 (Currently Amended) : Device according to claim 1**,** wherein **a** control and measuring means are integrated**.**

Claim 3 (Currently Amended) : Device according to **claim 1,** ~~claims 1 to 2,~~ where the implantable part of a sensor is a full, rigid, thin pin-shaped module**.**

Claim 4 (Currently Amended) : Device according to **claim 1,** ~~claims 1 to 3,~~ where the implantable part of a sensor has a diameter below 250 µm and an implantation depth of 1 to 5 mm.

Claim 5 (Currently Amended) : Device according to claims **claim 1,** ~~claims 1 to 4,~~ where the implantable part of a sensor is a pin coated with a sensing layer**.**

Claim 6 (Currently Amended) : Device according to **claim 1,** ~~claims 1 to 5,~~ where the implantable part of a sensor includes a probe serving as a semi-permeable interface between the body fluid and the sensing layer**.**

Claim 7 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 6,**~~ where the implantable part of a sensor includes a light conducting element.

Claim 8 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 6,**~~ where the implantable part of a sensor is a ion-selective probe.

Claim 9 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 6,**~~ where the implantable part of a sensor is a sonnar probe.

Claim 10 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 6,**~~ where the implantable part of a sensor is a surface plasmon resonance probe.

Claim 11 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 10,**~~ where the implantable parts of the sensors consist of more than one functionally similar or different elements.

Claim 12 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 11,**~~ where the implantable part of the sensors has a structured surface in such a way that the exposed surface of the sensing layer is increased and protected from stripping during insertion into the skin.

Claim 13 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 12,**~~ where several sensors are used each being selective for a specific analyte.

Claim 14 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 13,**~~ where the means for securing adherence to the skin is an adhesive layer for temporary wearing on the body, and the adhesive layer is fixed on the flexible surface of the device by a reduced surface in comparison to the adhesive surface to the skin.

Claim 15 (Currently Amended): Device according to **claim 1,** ~~**claims 1 to 14,**~~ where the means for bringing the flexible surface into two distinct positions relative to the implantable tip

of the sensors makes use of the flexibility of this surface for a rapid movement from the first to the second position by relaxation from an enforced tense position.

Claim 16 (Currently Amended) : Device according to **claim 1,** ~~**claims 1 to 15,**~~ where the means for bringing the flexible surface into two distinct positions is a mechanism actuated by pressing a knob or the cap of the device, respectively.

Claim 17 (Currently Amended) : Device according to **claim 1,** ~~**claims 1 to 16,**~~ where control and measuring means a) survey the correct functioning of the device, b) transform sensor signals into analyte measurements, c) store, display and transmit analyte measurements online or batch-wise, and d) give warning signals if analyte measurement is not within a predefined range.

Claim 18 (Currently Amended) : Device according to **claim 1,** ~~**claims 1 to 17,**~~ where the device is composed of a reusable part comprising all control elements and a disposable part comprising at least the elements for adhesion to the skin and insertion into the skin.

Claim 19 (Currently Amended) : Device according to **claim 1,** ~~**claims 1 to 18,**~~ where the reusable part can be combined with a variety of disposable parts with different sensors and there is an automatic recognition by means of a code on the disposable part.

Claim 20 (Currently Amended) : Device according to **claim 1,** ~~**claims 1 to 19,**~~ where the disposable part is housed in a tool which allows, essentially through push-pull manipulations the assembly with the reusable part as well as all operations for making the device ready-to-use, and after use to disassemble the two parts.

Claim 21 (Currently Amended) : Method for measuring the concentration-time profiles of endogenous substances over a prolonged time period from hours to several days, by a) preparing the device according to **claim 1** ~~**claims 1 to 20**~~ ready-to-use, b) attaching it to the prepared skin **of a subject**, c) **releasing** ~~**activating**~~ the mechanism **to insert** ~~**for inserting**~~ the implantable parts of the sensors into the skin and **to start** ~~**for starting**~~ the measuring process, d) measuring the concentration of the analytes by means of processing ~~**the**~~ sensor signals. ~~**and e) using the**~~

~~measured concentrations for display and warning signals, and/or transmitting them online or batch-wise for further processing~~

Claim 22 (Currently Amended) : Method for measuring the concentration-time profiles of exogenous substances including drugs and their metabolites or model compounds with ~~well established~~ well-established metabolic pathways over a prolonged time period from hours to several days, comprising a) preparing the device according to claim 1 ready-to-use, b) attaching it to prepared skin of a subject, c) releasing the mechanism to insert the implantable parts of the sensors into the skin and to start the measuring process, d) measuring the concentration of one or more drugs or metabolites by means of processing sensor signals, and e) ~~according to claim 21 by~~ administering one or more ~~several~~ substances to the subject ~~individual~~ by oral, intravenous, subcutaneous or other means as an acute, subchronic or chronic application.

Claim 23 (Currently Amended) : The method ~~Use of the methods~~ of claim 21 or 22, further comprising using the measured concentrations ~~claims 21 and 22~~ for the diagnosis of organ function.

Claim 24 (Currently Amended) : The method ~~Use of the methods~~ of claim 21 or 22, further comprising using the measured concentrations ~~claims 21 to 23~~ for the individualized adjustment of drug dosing and prediction of drug-drug interactions.

Claim 25 (Currently Amended) : The method ~~Use of the methods~~ of claim 21 or 22, further comprising using the measured concentrations, ~~claims 21 to 24 by inclusion of~~ personal diagnostic data of the patient and pharmacokinetic modeling algorithms to select a drug dosing schedule.

Claim 26 (Currently Amended) : The method ~~The Use of the device~~ according to claim 21 or 22, comprising receiving a signal from an electronic sensor in said device and using said signal to automatically adjust ~~claims 1 to 20 for automatic adjustment of~~ the dosing of pharmacologically active compounds being delivered to the subject ~~in connection with their~~

~~controlled delivery~~ by infusion pumps.

Claim 27 (Currently Amended) : **The method** ~~**The Use of the device**~~ according to **claim 21 or 22, comprising receiving a signal from an electronic sensor in said device and using said signal to automatically adjust** ~~**claims 1 to 20 for adjustment of diabetic patients to an optimized once or several times per day**~~ insulin injection and/or oral anti-diabetic drug treatment **for the subject.**